

Application No.: 10/523,490  
Docket No.: SR0017

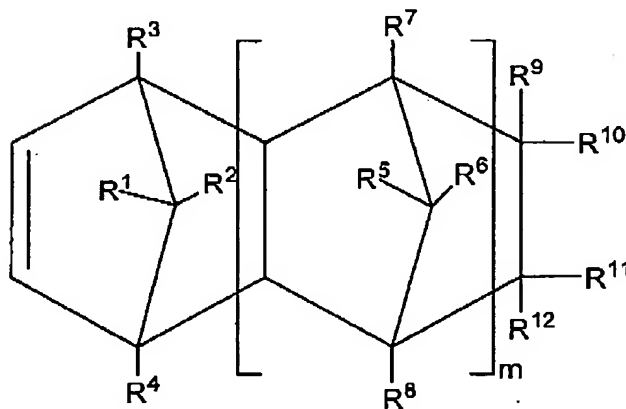
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Listing of Claims

Claim 1. (Original) A fluorine-containing copolymer comprising:

- a) a repeat unit derived from an ethylenically unsaturated compound having at least one fluorine atom covalently attached to an ethylenically unsaturated carbon atom; and
- b) a repeat unit derived from an ethylenically unsaturated cyclic compound of structure:



wherein m is 0, 1 or 2;

R<sup>1</sup> to R<sup>12</sup> are independently H, halogen, carboxyl, OH, or

O<sub>2</sub>C-R<sup>13</sup>, wherein R<sup>13</sup> is a C<sub>1</sub>-C<sub>20</sub> hydrocarbon group and at least one of R<sup>1</sup> to R<sup>12</sup> is OH or O<sub>2</sub>C-R<sup>13</sup>.

Claim 2. (Original) The fluorine-containing copolymer of Claim 1, wherein R<sup>1</sup> to R<sup>11</sup> are each hydrogen, m is zero, and R<sup>12</sup> is OH or O<sub>2</sub>C-R<sup>13</sup>, wherein R<sup>13</sup> is a C<sub>1</sub>-C<sub>20</sub> hydrocarbon group.

Claim 3. (Original) The fluorine-containing copolymer of Claim 2, wherein R<sup>13</sup> is a linear or branched alkyl group of 1 to 10 carbon atoms.

Claim 4. (Original) The fluorine-containing copolymer of Claim 3, wherein R<sup>13</sup> is methyl, ethyl or propyl.

Claim 5. (Original) The fluorine containing copolymer of Claim 1, wherein the halogen is chlorine, fluorine, or bromine.

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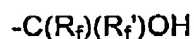
Claim 6. (Original) The fluorine-containing copolymer of Claim 1, wherein repeat unit (a) is derived from tetrafluoroethylene, hexafluoropropylene, chlorotrifluoroethylene, trifluoroethylene, vinyl fluoride, vinylidene fluoride, perfluoro-(2,2-dimethyl-1,3-dioxole), perfluoro-(2-methylene-4-methyl-1,3-dioxolane),  $\text{CF}_2=\text{CFO}(\text{CF}_2)_t\text{CF}=\text{CF}_2$ , wherein  $t$  is 1 or 2, or  $\text{R}_f\text{OCF}=\text{CF}_2$  wherein  $\text{R}_f$  is a saturated fluoroalkyl group of from 1 to 10 carbon atoms.

Claim 7. (Original) The fluorine-containing copolymer of Claim 6, wherein repeat unit (a) is derived from tetrafluoroethylene.

Claim 8. (Original) The fluorine-containing copolymer of Claim 1, further comprising a repeat unit derived from tert-butyl acrylate or methyl adamantyl acrylate.

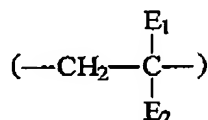
Claim 9. (Original) The fluorine-containing copolymer of Claim 1, further comprising a repeat unit which is a norbornyl fluoroalcohol or a protected norbornyl fluoroalcohol.

Claim 10. (Original) The fluorine-containing copolymer of Claim 1, further comprising a fluoroalcohol group derived from an ethylenically unsaturated compound containing a fluoroalcohol group having the structure:



wherein  $\text{R}_f$  and  $\text{R}_f'$  are the same or different fluoroalkyl groups of from 1 to 10 carbon atoms or taken together are  $(\text{CF}_2)_n$  wherein  $n$  is 2 to 10.

Claim 11. (Original) The fluorine containing copolymer of Claim 1, further comprising an acid-containing or protected acid-containing structural unit:



wherein  $\text{E}_1$  is H or  $\text{C}_1\text{--C}_{12}$  alkyl;  $\text{E}_2$  is  $\text{CO}_2\text{E}_3$ , or  $\text{SO}_3\text{E}$ ; and  $\text{E}$  and  $\text{E}_3$  are H or unsubstituted or heteroatom-substituted  $\text{C}_1\text{--C}_{12}$  alkyl.

Claim 12. (Original) The fluorine containing copolymer of Claim 11, wherein the heteroatom is S, O, or N.

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Claims 13 – 28 (Canceled)